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ABSTRACT

This guide was developed for the Department of
Defense Dependent Schools Pacific Region science coordinator,
elementary school principals, and teachers. Its intended purpose is
to serve as aid in identifying strengths and weaknesses of science
programs in grades kindergarten through grade six. The guide is also
used as a notebook by the science coordinator during school visits.
Included in the areas to be assessed are: program indicators; program
management; budget; library and media center; the use of computers;
curriculum guides; time allocations; teaching staff; adopted
textbooks; the school improvement plan; and standardized testing.
(KR)

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DEPARTMENT OF DEFENSE DEPENDENT SCHOOLS PACIFIC REGION

ELEMENTARY SCHOOL

SCIENCE EDUCATION PROGRAM

EVALUATION GUIDE

SY90-91

ED325354

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INTRODUCTION

The guide was developed for the Department of Defense Dependent Schools Pacific Region science coordinator, elementary school principals and teachers. Its intended purpose is to serve as an aid in identifying strengths and weaknesses of science programs in grades kindergarten through 6. The guide is also used as a notebook by the science coordinator during school visits. Wherever possible, references have been cited in context so that users may, if necessary, consult the supporting documents. A list of those references is provided below.

LIST OF SUPPORTING DOCUMENTS

01. ETG/635-3001/303-5 Memorandum Quality Program Indicators, of 87MAR23.
02. DS Manual 2005.1, Administrators' Guide, section 402.
03. DS Manual 2200.1, Science Objectives for 1985-1992.
04. DS Manual 2000.8, K-6 Learning & Time Allocation Guide, of 85DEC.
05. ERH/635-2151/303-11 Memorandum Approved Textbook Listing, of 89AUG18.

SCHOOL: _____

COUNTRY: _____

VISITATION DATE/S: _____

VISIT NUMBER: _____

PURPOSE/S OF THE VISIT

1. _____

2. _____

3. _____

IN BRIEFING

1. Name/s of individual/s with whom the briefing was held: _____

2. Previous Visit:

a. Date: _____

b. Program recommendations made during the previous site visit and actions taken on the recommendations:

(01) Recommendation: _____

Action: _____

(02) Recommendation: _____

Action: _____

(03) Recommendation: _____

Action: _____

(04) Recommendation: _____

Action: _____

(05) Recommendation: _____

Action: _____

(06) Recommendation: _____

Action: _____

(07) Recommendation: _____

Action: _____

(08) Recommendation: _____

Action: _____

(09) Recommendation: _____

Action: _____

(10) Recommendation: _____

Action: _____

(11) Recommendation: _____

Action: _____

QUALITY PROGRAM INDICATORS

1. Quality Program Indicators (ETG/635-3001/303-5 Memorandum of 87MAR23)
Indicators upon which the program evaluation will focus during the visit,
as identified during the inbriefing:

a. _____

b. _____

c. _____

d. _____

TEACHERS. SPECIALISTS AND ADMINISTRATORS
VISITED

1. NAMES/RESPONSIBILITIES

NAMES/RESPONSIBILITIES

- | | |
|-----------|-----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |
| 7. _____ | 8. _____ |
| 9. _____ | 10. _____ |
| 11. _____ | 12. _____ |
| 13. _____ | 14. _____ |
| 15. _____ | 16. _____ |
| 17. _____ | 18. _____ |
| 19. _____ | 20. _____ |
| 21. _____ | 22. _____ |
| 23. _____ | 24. _____ |
| 25. _____ | 26. _____ |
| 27. _____ | 28. _____ |
| 29. _____ | 30. _____ |
| 31. _____ | 32. _____ |

2. Notes:

- a. _____

- b. _____

- c. _____

d. _____

e. _____

f. _____

SCIENCE PROGRAM MANAGEMENT

1. General Observations:	Yes	No
a. Program Administration.		
(01) A science committee coordinates the science program.	_____	_____
(02) A science committee has full administrative responsibility for the science program except teacher evaluation.	_____	_____
(03) Supervision of the science program is done by regular school administrators.	_____	_____
(04) Supervision of the science program is judged to be adequate.	_____	_____
(05) Administrative support of the science program is adequate.	_____	_____
b. Curriculum Coordination:		
(01) There is vertical coordination in the program from grade to grade.	_____	_____
(02) There is horizontal coordination among teachers at the same grade level.	_____	_____
(03) Repetition in content is limited from year-to-year except where it is planned.	_____	_____
(04) Teachers have an opportunity to plan with other teachers;		
(a) in the same grade.	_____	_____

(b) teaching different grades. _____|_____

c. Decision-making Process in the Science Program:

(01) Teachers have frequent opportunities to provide input regarding the science program. _____|_____

(02) Teachers have great independence in developing their science classes. _____|_____

(03) Teachers have few opportunities to influence the science program. _____|_____

2. Name of the science committee chair: _____

3. Number of teachers of science: _____

4. Frequency of science meetings: _____

5. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recommendation: _____

SCIENCE BUDGET

(DS Manual 2005.1, Administrators' Guide, section 402):

1. Dollar Amount (total): _____

a. Consumable Materials: _____

b. Equipment: _____

c. Library Materials:_____

d. Science Kit Refills:_____

e. Textbooks:_____

2. Name of Person Who Drafts the Science Budget:_____

3. Process Used When Drafting the Budget:_____

4. Yearly Budget Deadline:_____

5. Observations/Recommendations:

a. Observation:_____

Recommendation:_____

b. Observation:_____

Recommendation:_____

c. Observation:_____

Recommendation:_____

d. Observation: _____

Recommendation: _____

LIBRARY AND MEDIA CENTER

1. General Adequacy: The presence of sufficient, appropriate science books, student periodicals, professional science teaching periodicals and science media programs is essential to a good science education program. All of these items should be matched as closely as possible with the science program objectives and teaching methods required by the curriculum. Versatility, intended use, the user, and application to student investigations must be considered in assessing the appropriateness of existing library and media center inventories to adequately support the science education program as well as assessing new purchases in the area of science.

To assess the general adequacy of the science library and media center portion of the science program, all components that have been met in the list below should be checked.

FUNDAMENTAL	SUBSTANTIAL	EXEMPLARY
<input type="checkbox"/> Sufficient library books and media programs are available to support all activities and topics in the classes offered. <input type="checkbox"/> An annual budget provides for the purchase of science books and media programs.	<input type="checkbox"/> All necessary instructional resources including audio visual resources related to the science curriculum are available in the media center. <input type="checkbox"/> Equipment and library materials provided for in the curriculum plan are available to individuals for use when conducting investigations.	<input type="checkbox"/> Full use is made of instructional media to supplement science learning in the classroom. <input type="checkbox"/> Lists of science media programs held by the media center are available for teacher use. <input type="checkbox"/> There is an on going program conducted by media specialist to evaluate the currency of science books and media programs.

2. Books:

a. Approximate Number of Science Books Held: _____

b. Are the Science Books Well Distributed Across All Science Areas?_____

3. Approximate Number of Science Reference Documents Held:_____

a. Professional Periodicals (subscriptions) in Science Areas:

(01) Number:_____

(02) Names:

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

(f)_____

b. Student Periodicals (subscriptions) in Science Areas:

(01) Number:_____

(02) Names:

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

(f)_____

4. Audio/Visual/Media Materials:

a. Number of Programs:_____

b. Distribution across the science areas:_____

5. Observations/Recommendations:

a. Observation:_____

Recommendation: _____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

COMPUTER PROGRAM IN SCIENCE

1. Software:

a. Numbers and types of computers: _____

b. Computer location/s: _____

c. Number of science software programs held by the school: _____

d. Is the software compatible with the computers? _____

e. Is the software well distributed across the science areas?_____

f. Ways in which science software is stored, cataloged and distributed to users:

g. Ways in which the computer/s is/are used:

(01)_____

(02)_____

(03)_____

(04)_____

3. Observations/Recommendations:

a. Observation:_____

Recommendation:_____

b. Observation:_____

Recommendation:_____

c. Observation:_____

Recommendation:_____

d. Observation:_____

Recommendation: _____

SCIENCE OBJECTIVES GUIDE

(DS Manual 2200.1, Science Objectives for 1985-1992)

1. Is a copy of the current guide available in the school office files? _____
2. Does each science teacher science have a copy of the most recent guide? _____

3. Guide usage:

a. How? _____

b. When? _____

4. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

K-6 LEARNING & TIME **ALLOCATION GUIDE**

(K-6 Learning & Time Allocation Guide DSM Manual 2000.8, of 85DEC)

1. Are the science sections of the guide available in the school office files?

2. Are guide wall charts posted where they can be used by:

a. Administrators _____

b. Teachers _____

c. Students _____

d. Parents _____

3. Does each science teacher have a copy of the guide? _____

4. Is there a relationship between information in the science sections of the guide and content in the various science classes?

5. Observations/Recommendations:

a. Observation: _____

Recomendation: _____

b. Observation: _____

Recomendation: _____

c. Observation: _____

Recomendation: _____

d. Observation: _____

Recomendation: _____

TEACHING STAFF

1. General Adequacy. Competency to teach science requires unique preparation and experience. To reach the optimum performance level, elementary teachers must go well beyond the minimum course work required for certification. They must become involved in professional organizations, read professional journals related to their field and stay abreast of contemporary curriculum recommendations. In addition, qualified science teachers must be able to work cooperatively within a hierarchy of responsibilities to provide a coordinated science program.

To assess the general adequacy of the science teaching faculty, check all components, in the list below, that have been met.

FUNDAMENTAL**SUBSTANTIAL****EXEMPLARY**

☐ All elementary teachers have had training in science and methods of teaching science.

☐ All science teachers are familiar with existing major curriculum developments at their grade levels.

☐ A majority of the teachers of science read regularly one professional journal.

☐ All teachers know appropriate safety practices for conducting laboratory activities at their grade level.

☐ The school has one or more teachers who have an emphasis in science and can act as teacher-leader for teaching science.

☐ A majority of the science teachers have attended at least one professional meeting in the past year.

☐ All science teachers can show evidence of having specifically studied major curriculum developments in their teaching area.

☐ Individual teachers have been designated as having specific leadership responsibilities in conducting the science program.

☐ A majority of the teachers have at least a Master's degree in elementary education and some have specialized in science education.

☐ All science teachers are active members of at least one professional organization and a majority have participated in the program of one professional meeting.

☐ All science teachers have directly participated in curriculum development, revision or adaptation projects that have been implemented in classroom teaching.

☐ A qualified individual is designated as coordinator of the science program with other staff members assigned to a hierarchy of teaching-leading responsibilities.

3. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recomendation: _____

c. Observation: _____

Recomendation: _____

d. Observation: _____

Recomandation: _____

ADOPTED TEXTBOOKS

(Approved Textbook Listing ERH/635-2151/303-11 Memoarndum of 89AUG18)

1. Is the approved list of science textbooks available? _____

2. Are the approved textbooks being used? _____

a. K Addision-Wesley Science, 1984: _____

b. 1-6 HBJ Science, 1985: _____

3. Does each teacher of science have:

a. A teachers' edition of the approved text? _____

b. A set of publisher generated program support materials? _____

4. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

TEACHER OF SCIENCE INSERVICE PROGRAM

1. Does the school have an on-going inservice program in science education for teachers?

2. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

NORTH CENTRAL ASSOCIATION (NCA)
EVALUATION

1. Date of last NCA Report: _____

2. Science related problems identified on the last NCA report:

a. _____

b. _____

c. _____

d. _____

SCHOOL IMPROVEMENT PLAN

1. Are the science education problems identified on the NCA report addressed here?

a. Actions being taken to resolve these problems:

(01) _____

(02) _____

(03) _____

(04) _____

2. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

STANDARDIZED TESTING PROGRAM

1. What science deficiencies were identified the last time standardized testing was conducted (scores lower than national norms)?

a. _____

b. _____

c. _____

d. _____

2. Observations/Recommendations:

a. Observation: _____

Recommendation: _____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

GENERAL OBSERVATIONS/RECOMMENDATIONS

1. _____

2. _____

3. _____

4.

OUT BRIEFING

1. Name of the person/s with whom the out briefing was held? _____

2. Notes:

a. _____

b. _____

c. _____

d. _____

END

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